DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-018777
Date Inspected: 12-Dec-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name:	See Below			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:
CWI Inspector: Mr. Bao Qian

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication.

Blast shop 1

ZPMC requested Caltrans personnel to perform visual inspections of South Tower Lift 4 interior surfaces between 130.5 meters elevation to 146 meters on December 12, 2010 at around 20:00 hours following the initial pre-blast cleaning of the steel surfaces. This QA Inspector along with other QA Inspectors performed random visual inspections of these areas. This QA Inspector visually observed approximately 30 locations that required grinding to resolve visual weld spatter, arc strikes, shallow nicks, scrapes, and other minor surface rejections and approximately five areas that require magnetic particle inspections. This QA Inspector observed identified one plate with a gouge, one weld with overlap and one area of base material porosity. ABF, ZPMC and QA Inspectors observed a total of eleven (11) locations which require weld repairs. This QA Inspector issued a "Blast Inspection" report to document the results of these inspections. See photographs below for additional information.

1 Base metal gouge @ edge of step plate 400 mm above top of 139M double diaphragm (CT).
2 Porosity skin D @ 720 mm above top of 143M diaphragm near skin C (ABF).

3 Porosity top of 131M diaphragm upper side (ZPMC).
4 Overlap bottom surface upper 139M diaphragm (CT).
5 Porosity top of 139M diaphragm skin D between first and second stiffener from skin E (ZPMC).
6 Porosity skin A bottom 143M diaphragm (ZPMC).
7 Porosity skin E bottom 143M diaphragm (ZPMC).
8 Porosity skin A base metal 200 mm above top of 139 double diaphragm (CT).
9 Porosity skin A base metal near skin B, 1020 mm above 135 M double diaphragm (ZPMC).
10 Cracked temporary tack weld skin E 143M diaphragm (CT).
11 Porosity skin E bottom 143M diaphragm near skin D (ZPMC).

OBG Bay 13

This QA Inspector observed ZPMC welder Mr. Duan Yangang, stencil 066422 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-FCM-Repair-1 make weld repairs to OBG segment 13AE grillage weld SA7038-037. ZPMC QC presented this QA Inspector with weld repair document B-WR-17837 that documents the repair of this weld. This QA Inspector observed a welding current of approximately 160 amps. This QA Inspector observed Mr. Duan Yangang appeared to be certified to make this weld and the base materials were heated with electric heaters to preheat and maintain the base material temperature of this weld joint. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Zhu Ming Song, stencil 204339 used shielded metal arc welding procedure specification WPS-345-SMAW-3G(3F)-FCM-Repair-1 to make OBG segment 14E tack welds between longitudinal diaphragm LD3040A and the bottom plate. This QA Inspector observed the base materials appear to have been preheated with a torch prior to welding and Mr. Zhu Ming Song appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wu Hai Jun, stencil 201087 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-Repair to make repairs of OBG segment 13BE SEG3011C stiffener plate to side plate welds. These welds had been visually rejected. This QA Inspector observed ZPMC CWI Mr. Bao Qian monitoring this welding and Mr. Wu Hai Jun appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

WELDING INSPECTION REPORT

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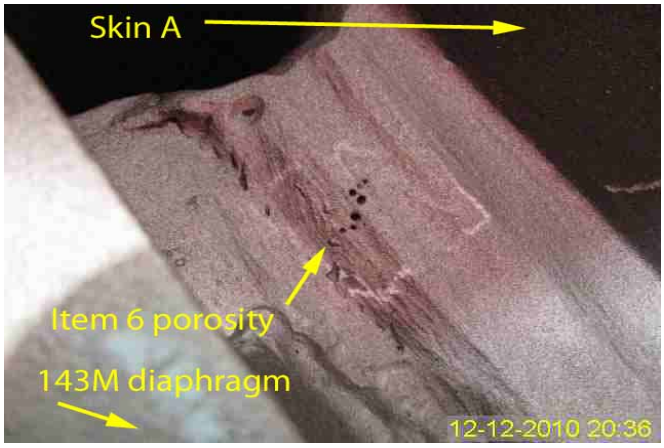

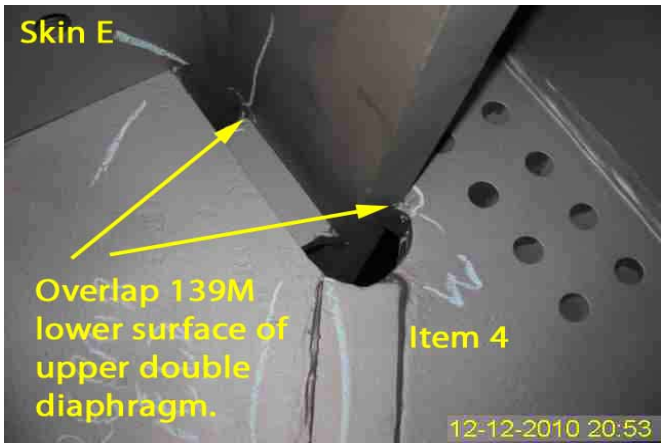

Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact James Devey +8615000026784, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer